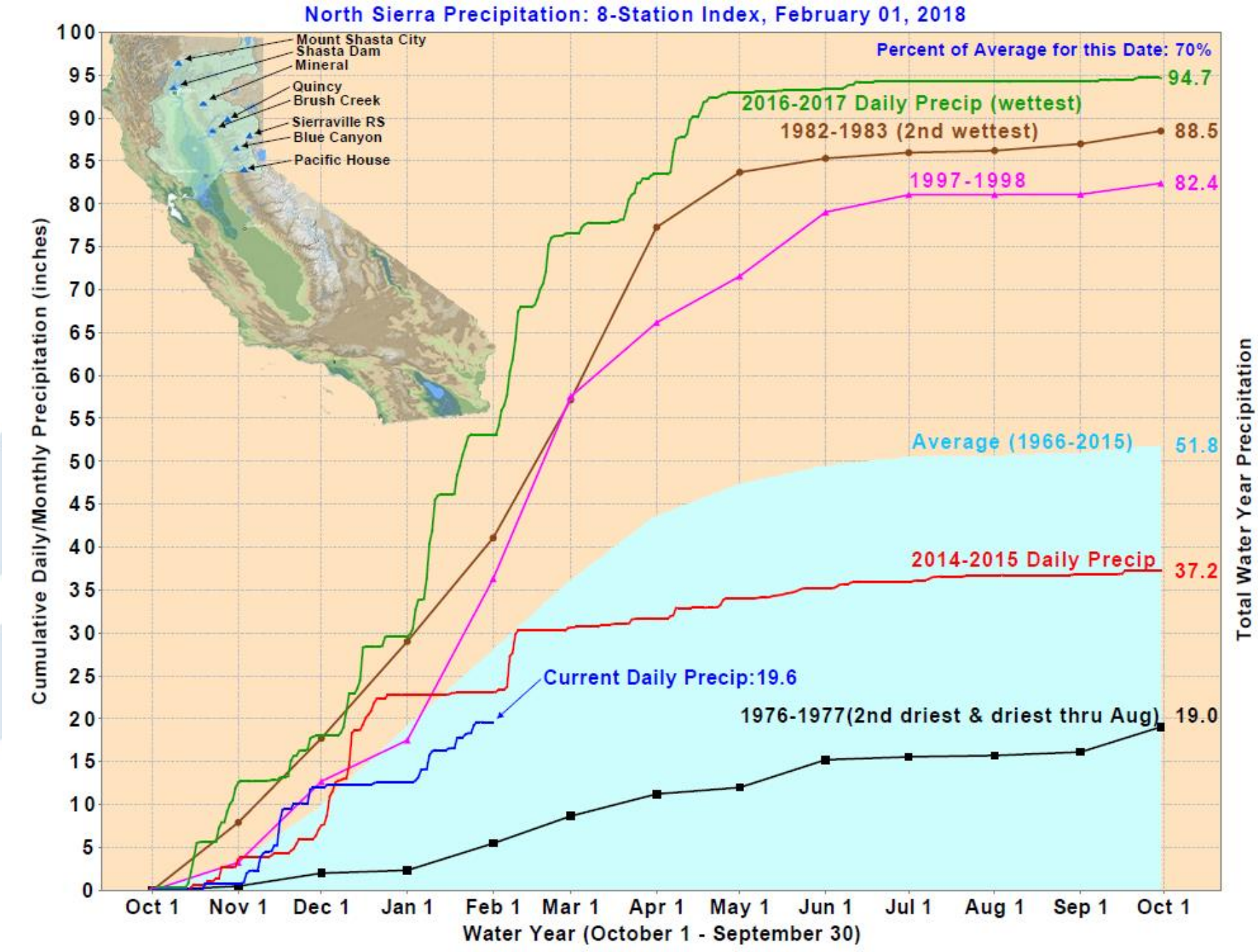
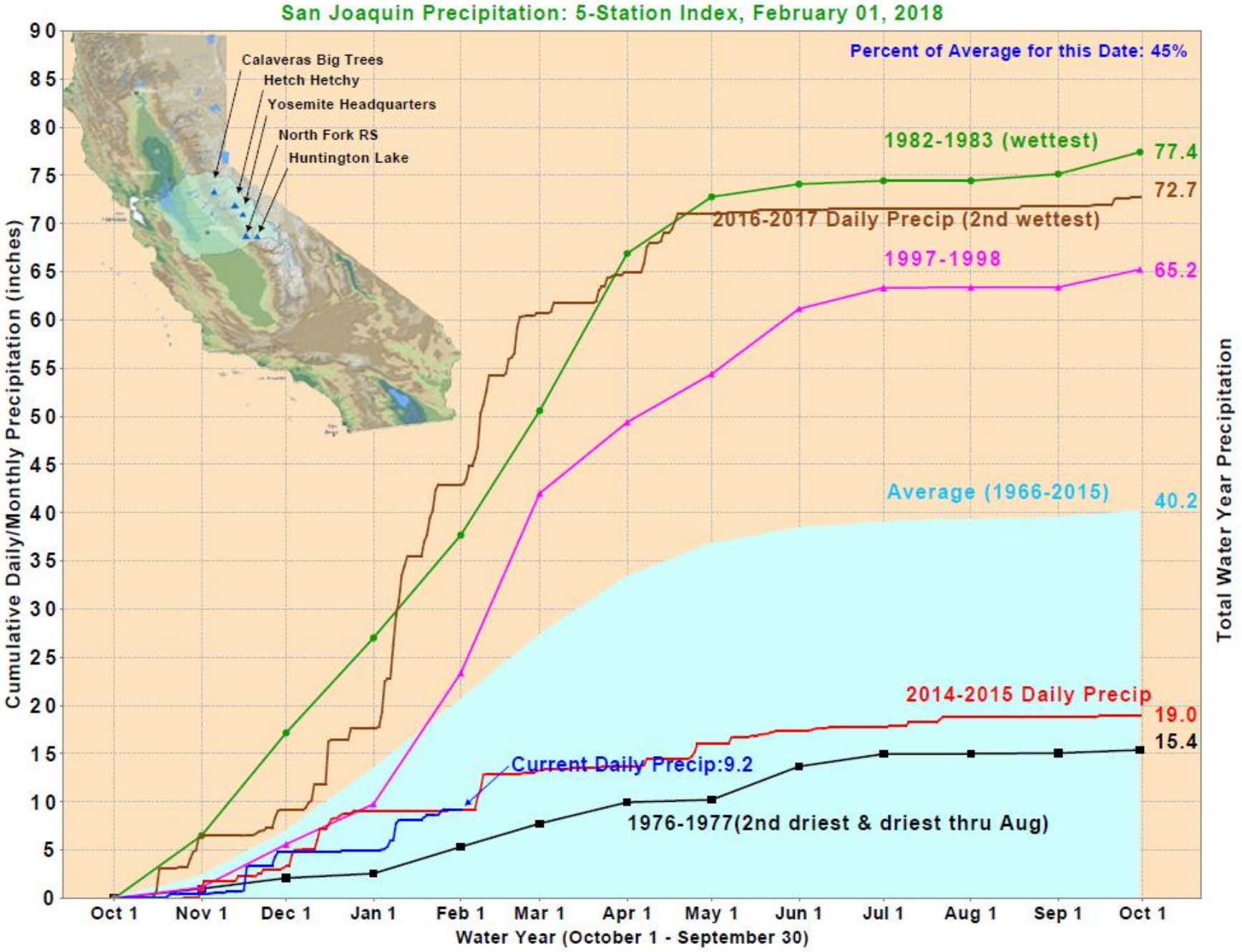
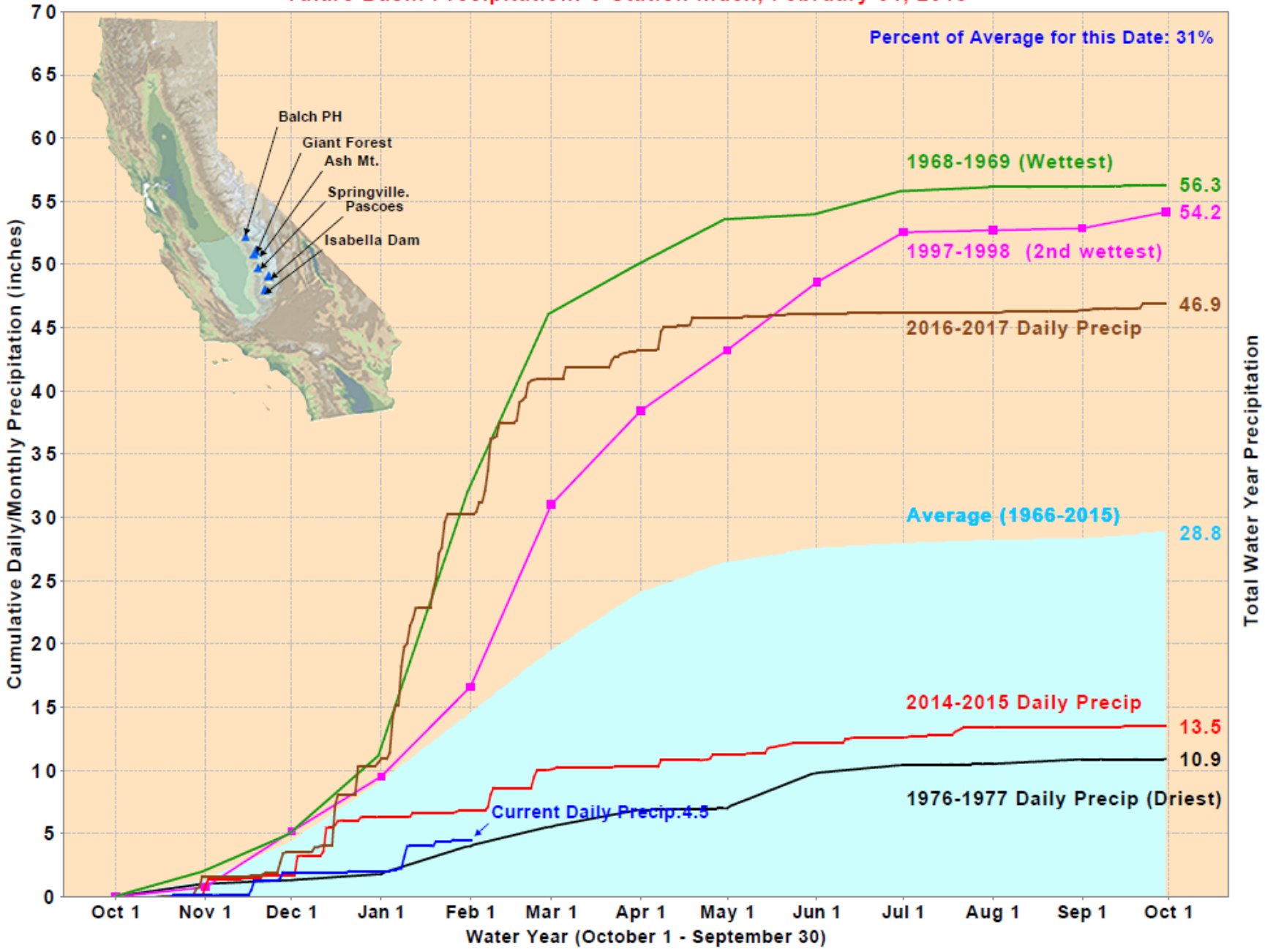
HYDROLOGY UPDATE FOR THE BAY-DELTA WATERSHED

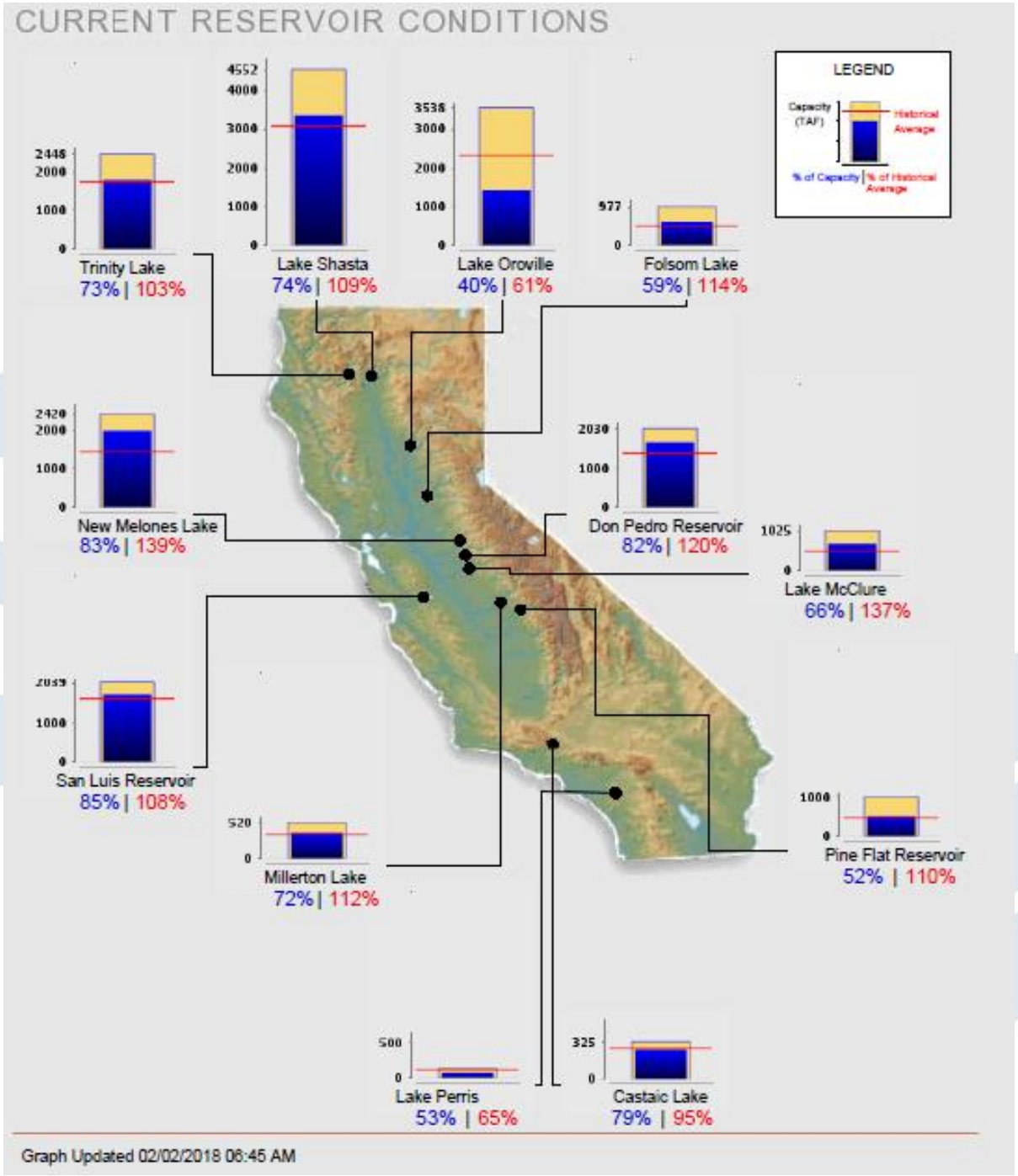
CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

FEBRUARY 6, 2018 – ITEM #7


North Sierra Precipitation: 8-Station Index, February 01, 2018
Mount Shasta City
Shasta Dam
Mineral
Quincy
Brush Creek
Sierraville RS
Blue Canyon
Pacific House
Percent of Average for this Date: 70%
2016-2017 Daily Precip (wettest)
94.7
1982-1983 (2nd wettest)
88.5
1997-1998
82.4
Average (1966-2015)
51.8
2014-2015 Daily Precip
37.2
Current Daily Precip:19.6
1976-1977(2nd driest & driest thru Aug)
19.0
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Oct 1
Water Year (October 1 - September 30)


San Joaquin Precipitation: 5-Station Index, February 01, 2018
Percent of Average for this Date: 45%
Calaveras Big Trees
Hetch Hetchy
Yosemite Headquarters
North Fork RS
Huntington Lake
1982-1983 (wettest)
77.4
72.7
2016-2017 Daily Precip (2nd wettest)
1997-1998
65.2
Average (1966-2015)
40.2
2014-2015 Daily Precip
19.0
15.4
Current Daily Precip:9.2
1976-1977(2nd driest & driest thru Aug)
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Oct 1
Water Year (October 1 - September 30)

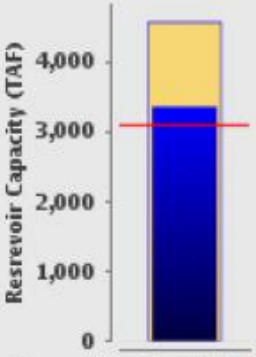

Tulare Basin Precipitation: 6-Station Index, February 01, 2018
Percent of Average for this Date: 31%
Balch PH
Giant Forest
Ash Mt.
Springville.
Pascoes
Isabella Dam
1968-1969 (Wettest)
56.3
54.2
1997-1998 (2nd wettest)
46.9
2016-2017 Daily Precip
Average (1966-2015)
28.8
2014-2015 Daily Precip
13.5
10.9
1976-1977 Daily Precip (Driest)
Current Daily Precip 4.5
Cumulative Daily/Monthly Precipitation (inches)
Total Water Year Precipitation
Water Year (October 1 - September 30)
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Oct 1
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70


CURRENT RESERVOIR CONDITIONS
LEGEND
Capacity (TAF)
Historical Average
% of Capacity
% of Historical Average
Trinity Lake
73% | 103%
Lake Shasta
74% | 109%
Lake Oroville
40% | 61%
Folsom Lake
59% | 114%
New Melones Lake
83% | 139%
Don Pedro Reservoir
82% | 120%
Lake McClure
66% | 137%
San Luis Reservoir
85% | 108%
Millerton Lake
72% | 112%
Pine Flat Reservoir
52% | 110%
Lake Perris
53% | 65%
Castaic Lake
79% | 95%
Graph Updated 02/02/2018 06:45 AM

Reservoir Conditions - Lake Shasta

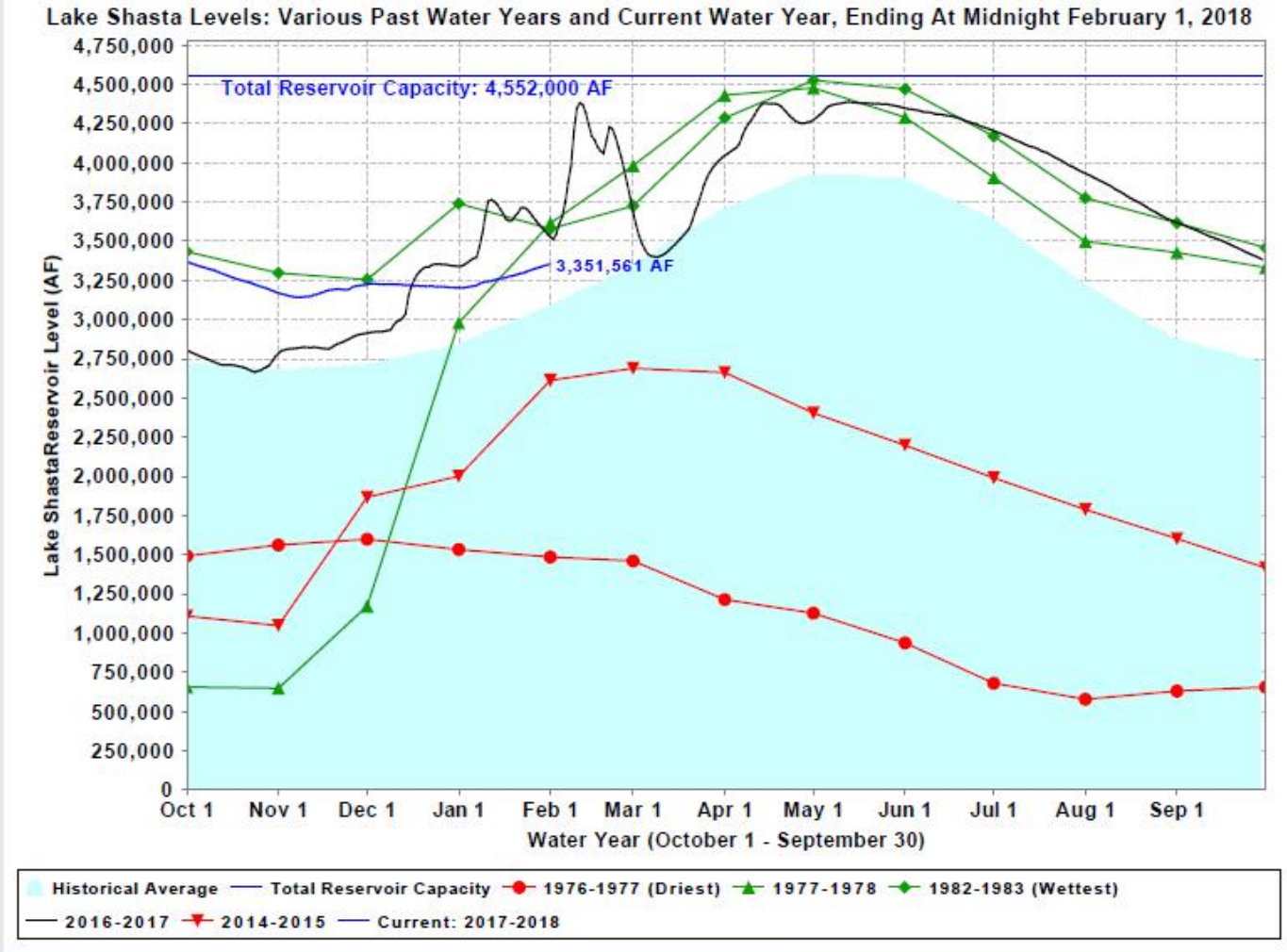
Lake Shasta Conditions

(as of Midnight - February 1, 2018)



Current Level: 3,351,561 AF

74% (Total Capacity) | 109% (Historical Avg.)

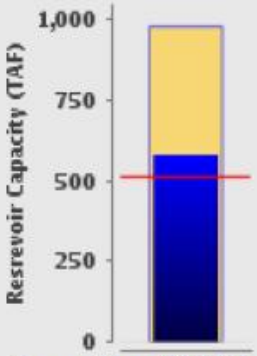


Data Updated 02/02/2018 07:15 AM

Reservoir Conditions - Folsom Lake

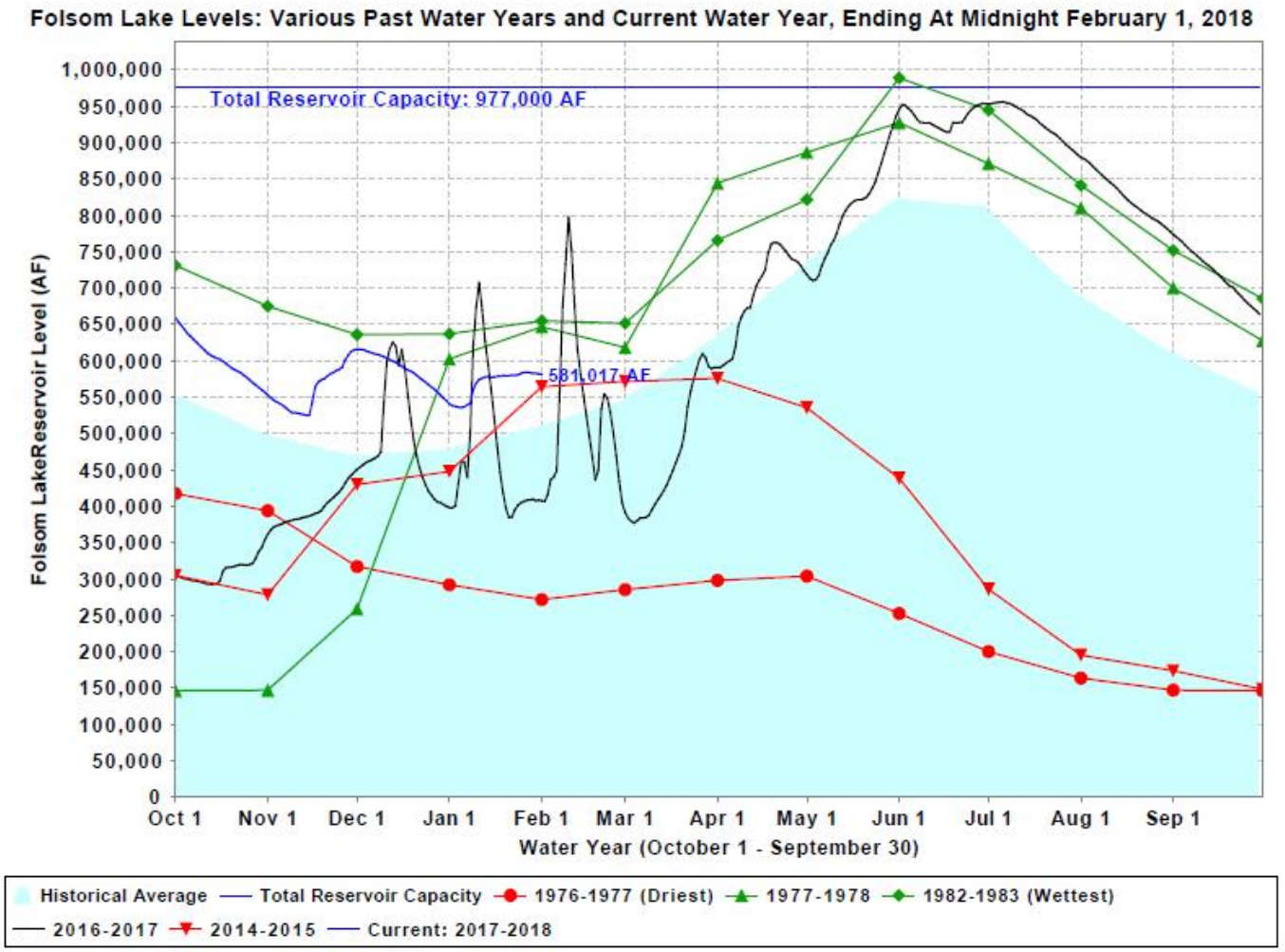
Folsom Lake Conditions

(as of Midnight - February 1, 2018)



Current Level: 581,017 AF

59% (Total Capacity) | 114% (Historical Avg.)

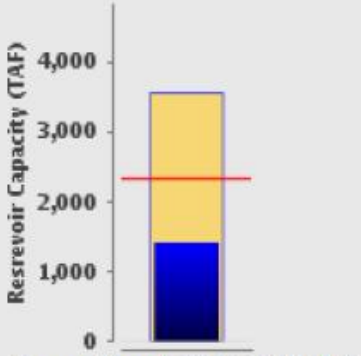


Data Updated 02/02/2018 07:45 AM

Reservoir Conditions - Lake Oroville

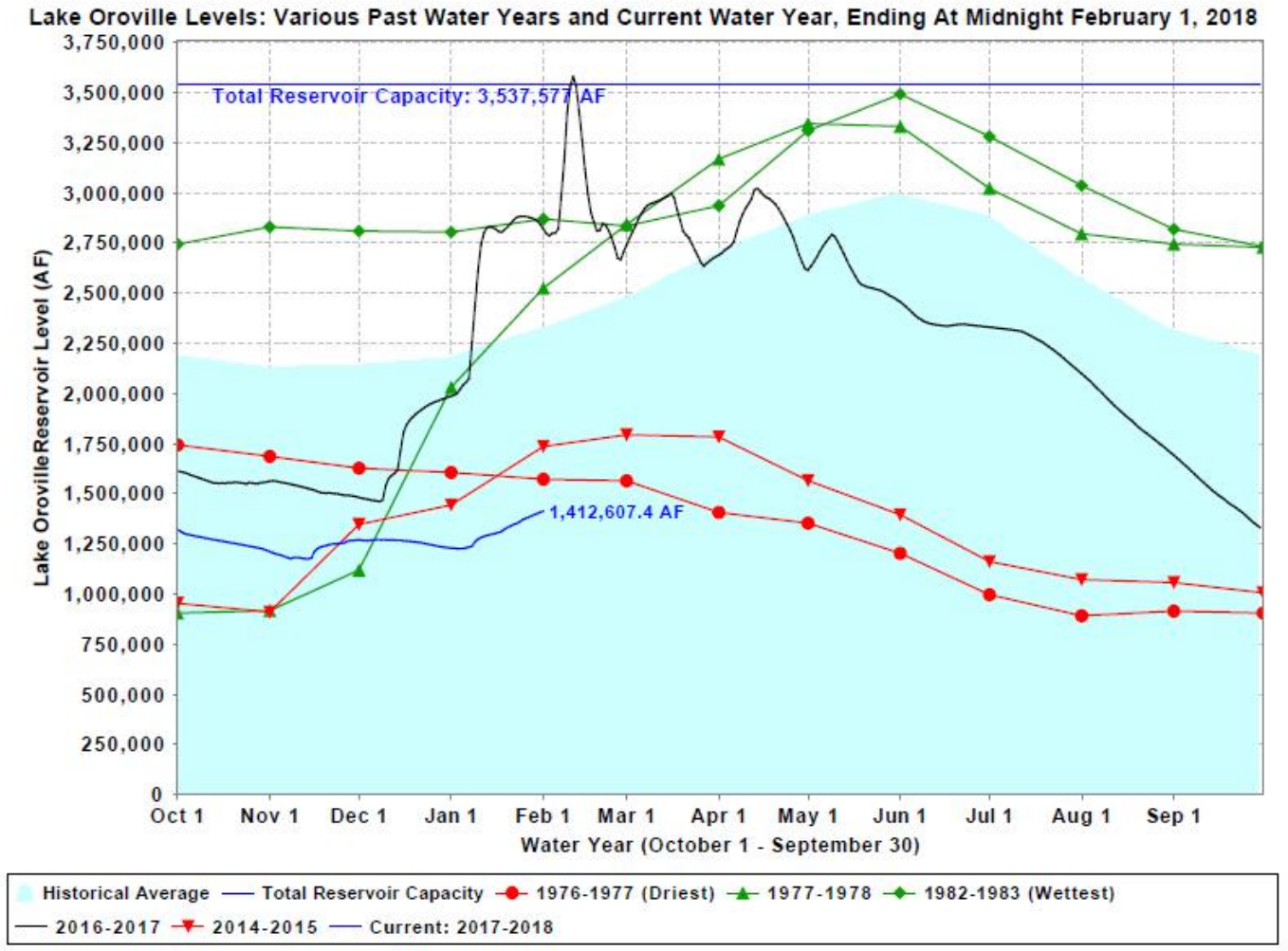
Lake Oroville Conditions

(as of Midnight - February 1, 2018)



Current Level: 1,412,607.4 AF

40% (Total Capacity) | 61% (Historical Avg.)

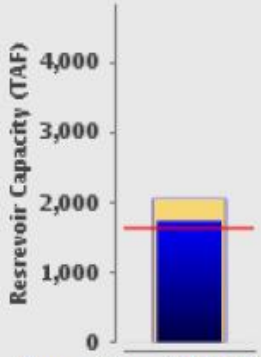


Data Updated 02/02/2018 07:45 AM

Reservoir Conditions - San Luis Res

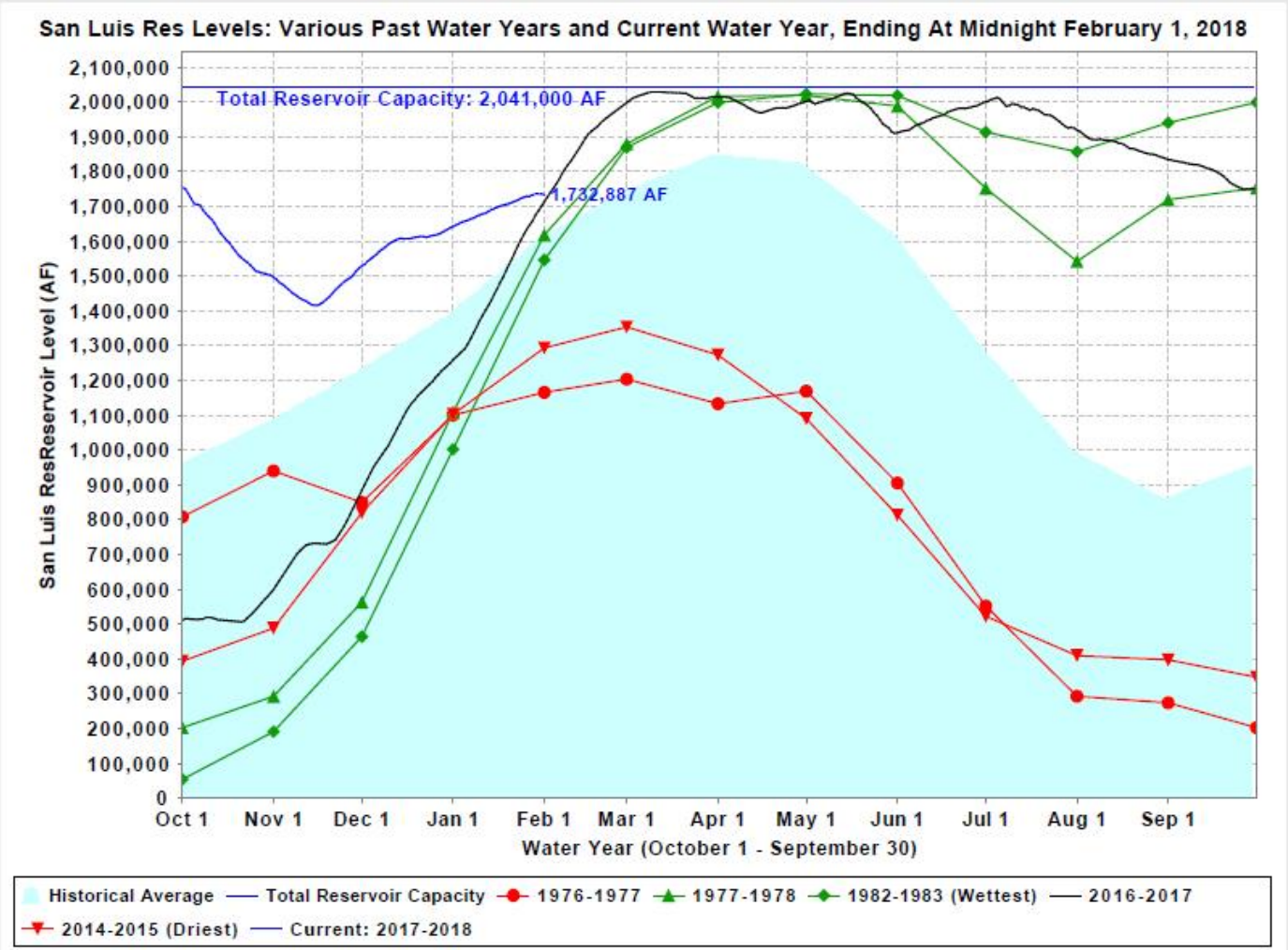
San Luis Res Conditions

(as of Midnight - February 1, 2018)



Current Level: 1,732,887 AF

85% (Total Capacity) | 108% (Historical Avg.)

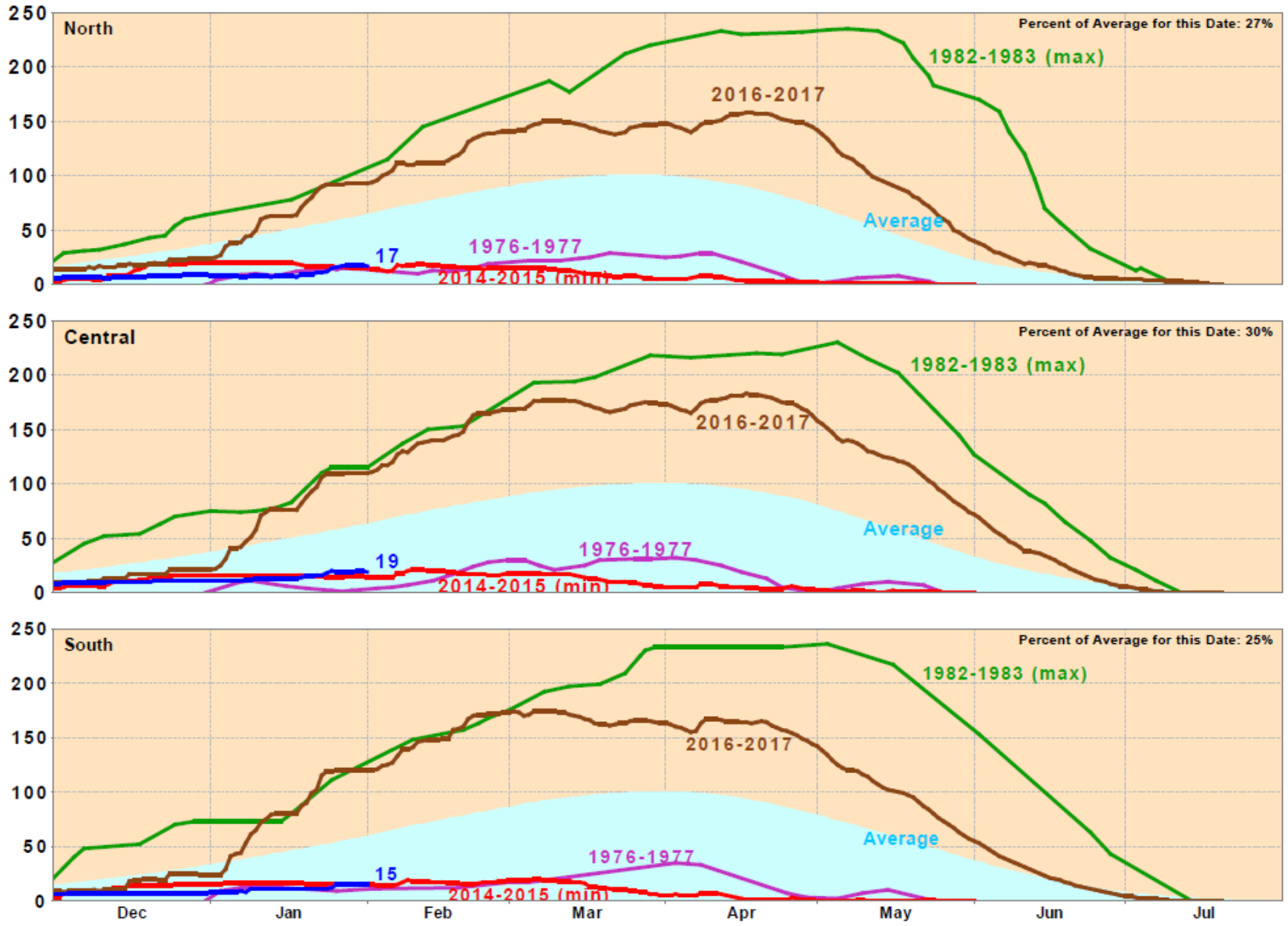


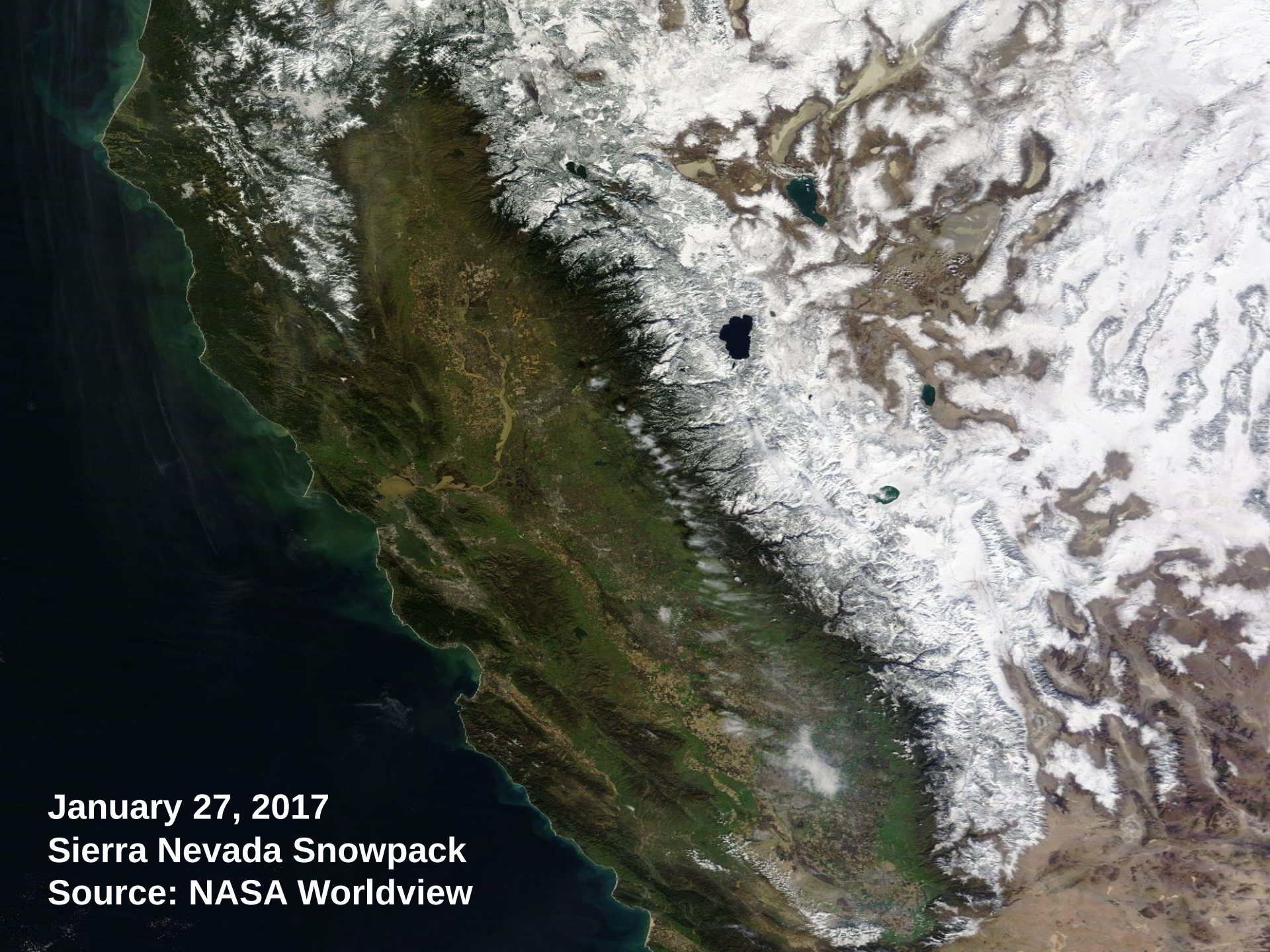
Data Updated 02/02/2018 07:45 AM

Other Reservoirs

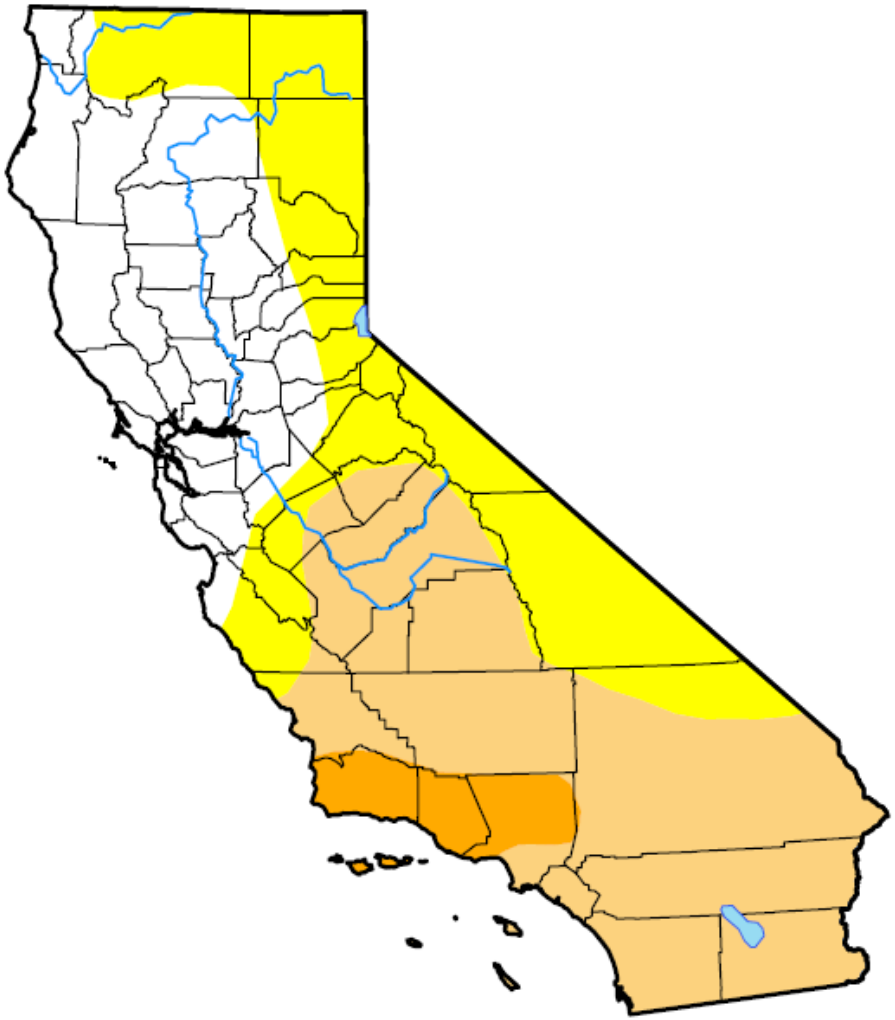
- **Cachuma Reservoir:** 75,400 acre-feet full out of 205,000 acre-foot capacity (37% of capacity and 48% of average)

- **Diamond Valley Lake:** 747,267 acre-feet full out of 810,000 acre-foot capacity (92% of capacity)


California Snow Water Content, February 1, 2018, Percent of April 1 Average
North
Percent of Average for this Date: 27%
1982-1983 (max)
2016-2017
Average
17
1976-1977
2014-2015 (min)
Central
Percent of Average for this Date: 30%
1982-1983 (max)
2016-2017
Average
19
1976-1977
2014-2015 (min)
South
Percent of Average for this Date: 25%
1982-1983 (max)
2016-2017
Average
15
1976-1977
2014-2015 (min)
250
200
150
100
50
0
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Statewide Percent of April 1: 17%
Statewide Percent of Average for Date: 27%


January 27, 2017
Sierra Nevada Snowpack
Source: NASA Worldview

U.S. Drought Monitor
California



January 30, 2018

(Released Thursday, Feb. 1, 2018)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.67	73.33	43.72	4.92	0.00	0.00
Last Week *01-23-2018*	45.48	54.52	12.69	0.00	0.00	0.00
3 Months Ago *10-31-2017*	77.90	22.10	8.24	0.00	0.00	0.00
Start of Calendar Year *01-02-2018*	55.70	44.30	12.69	0.00	0.00	0.00
Start of Water Year *09-26-2017*	77.88	22.12	8.24	0.00	0.00	0.00
One Year Ago *01-31-2017*	38.98	61.02	50.80	20.30	1.87	0.00

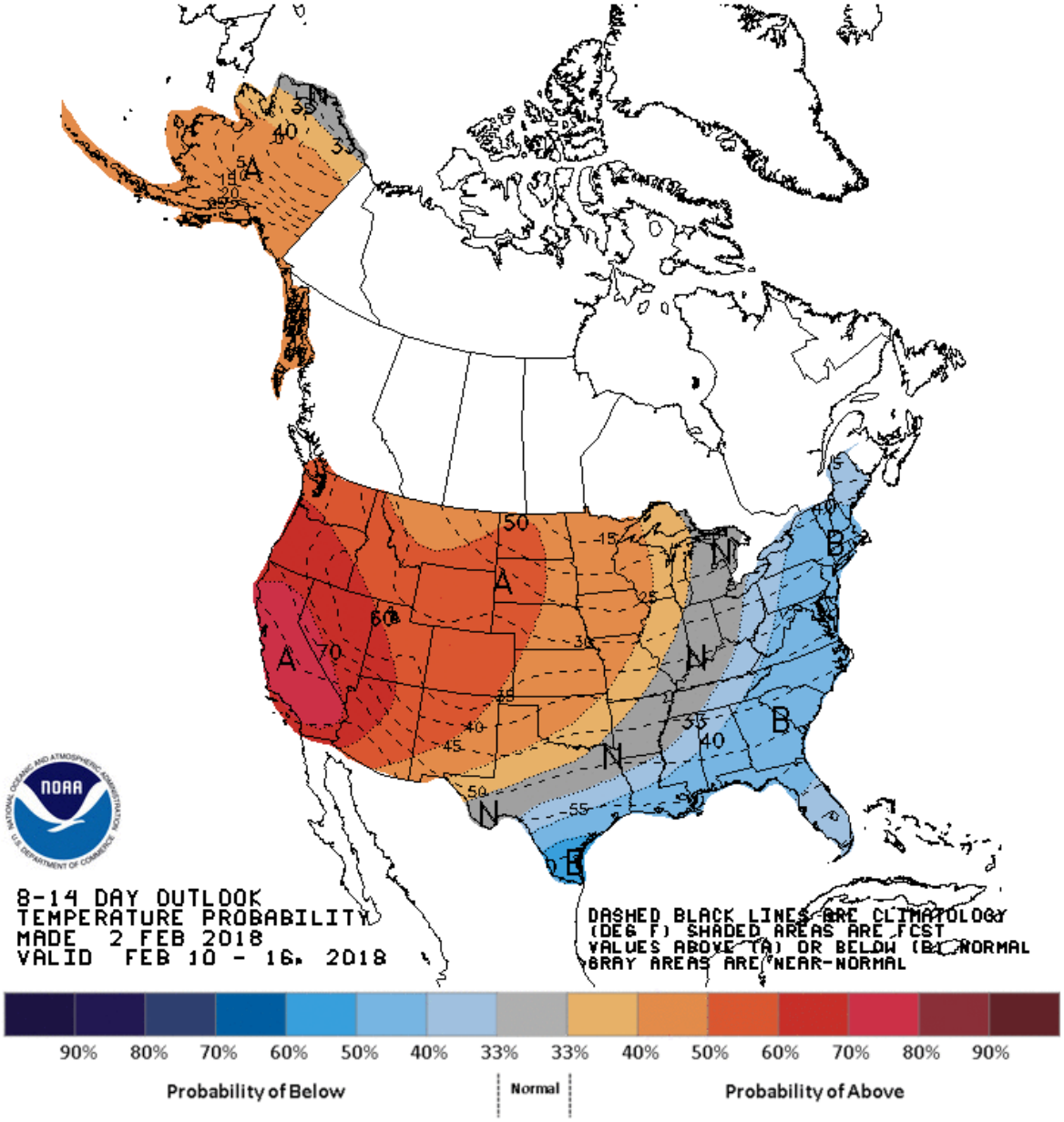
Intensity:

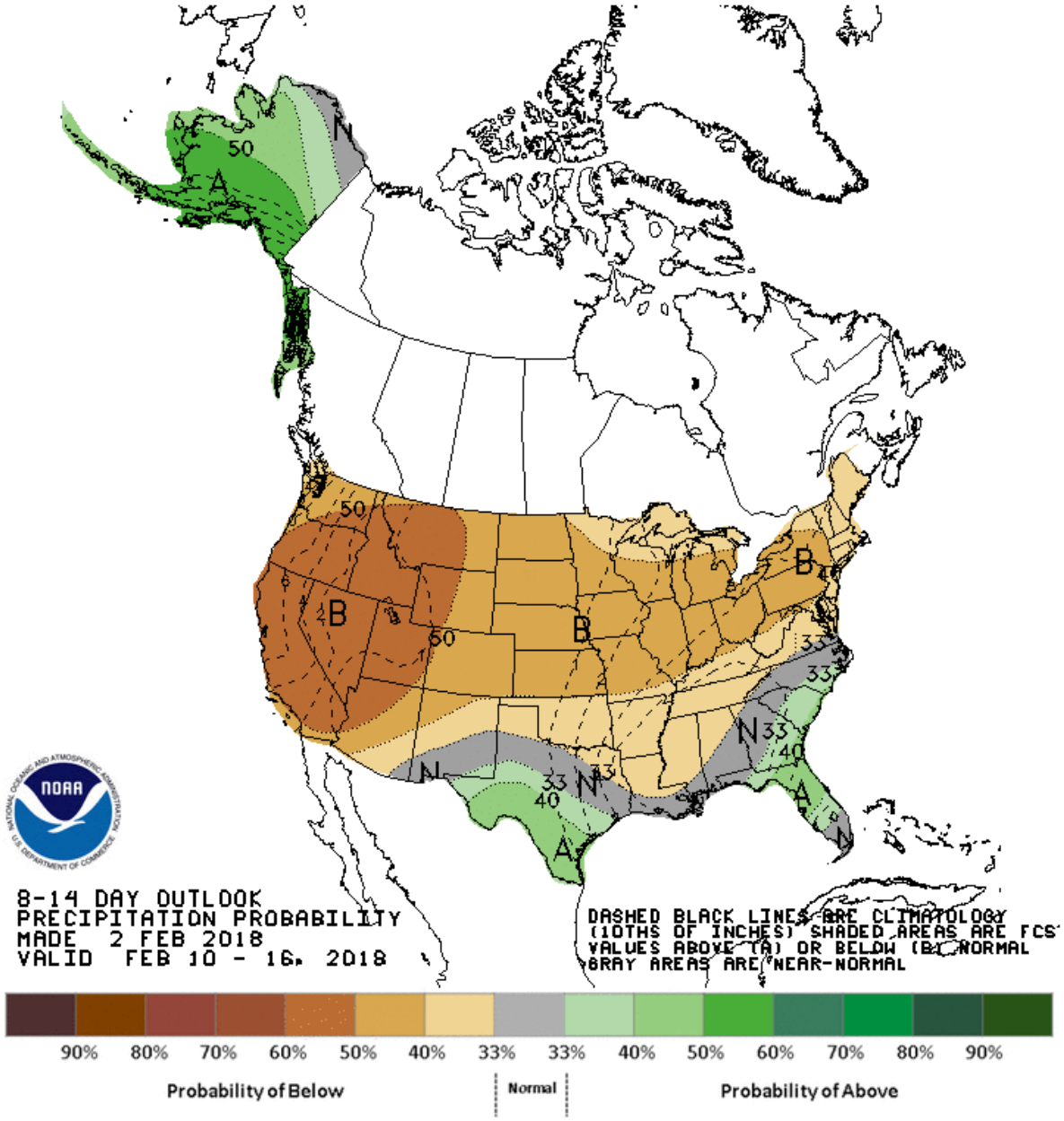
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

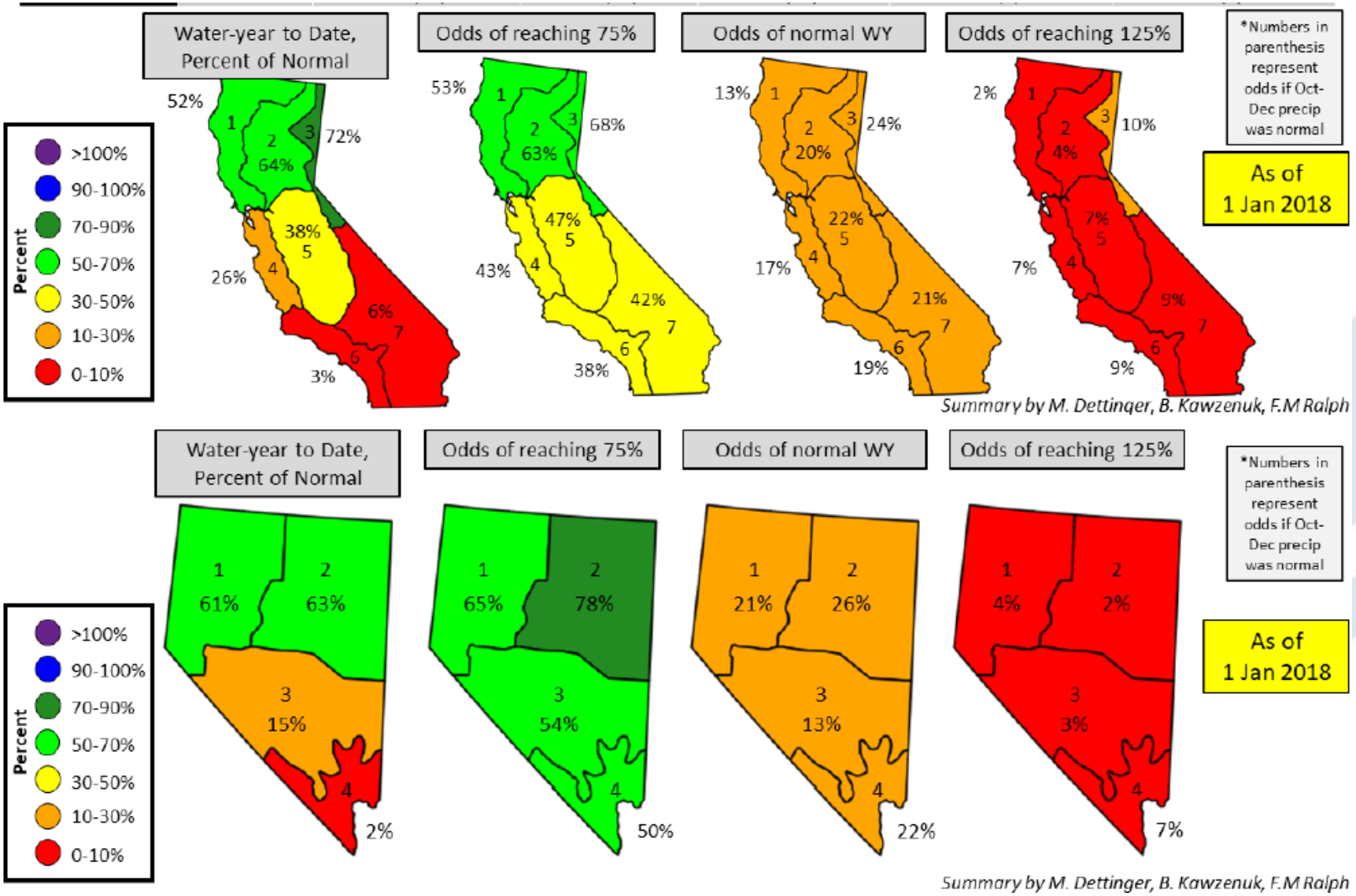
Author:
Richard Heim
NCEI/NOAA

http://droughtmonitor.unl.edu/


8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 2 FEB 2018
VALID FEB 10 - 16, 2018
DASHED BLACK LINES ARE CLIMATOLOGY
(DEG F) SHADED AREAS ARE FCST
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above


8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 2 FEB 2018
VALID FEB 10 - 16, 2018
DASHED BLACK LINES ARE CLIMATOLOGY
(10THS OF INCHES) SHADED AREAS ARE FCS
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL
90% 80% 70% 60% 50% 40% 33% 33% 40% 50% 60% 70% 80% 90%
Probability of Below
Normal
Probability of Above

What are our chances of reaching normal?



Questions?

Extra Slides

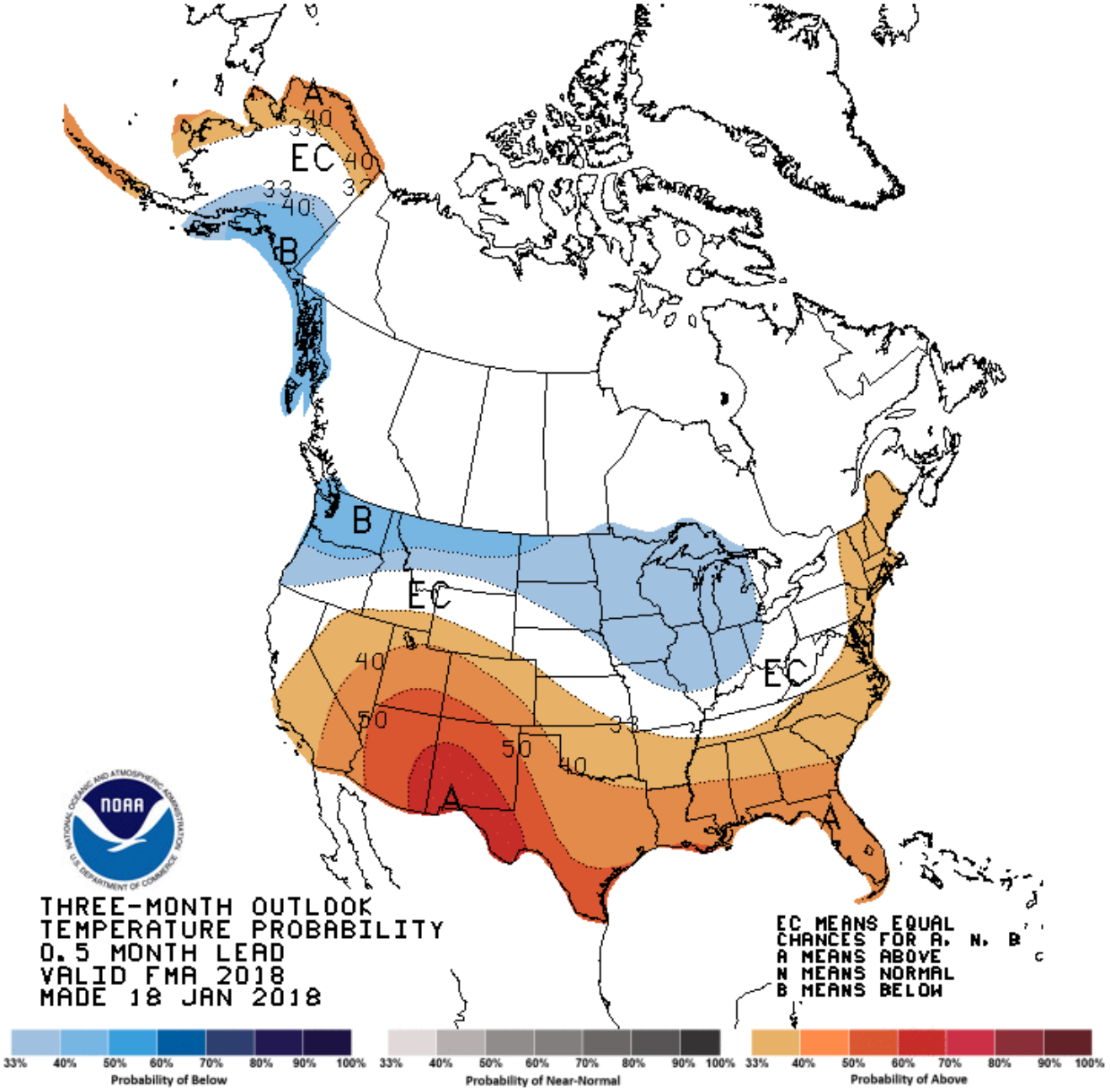
San Luis Reservoir

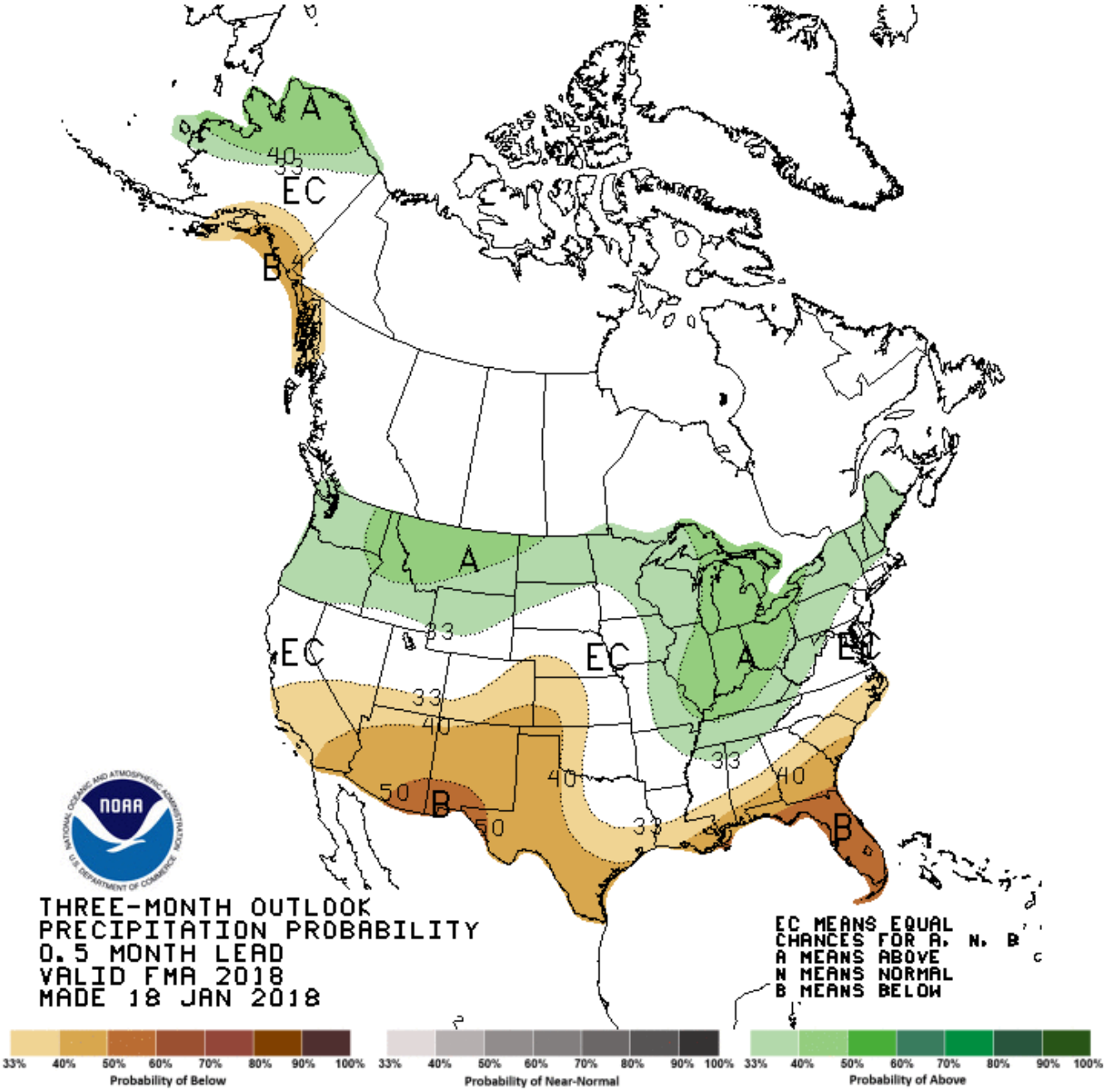
Total: 1,732,887 acre-feet full out of 2,041,000 acre-feet capacity (85% of capacity and 108% of average)

- **DWR:** 766,445 acre-feet full out of 1,062,180 acre-foot capacity (72% of operational capacity)
- **USBR**: 966,081 AF acre-feet full out of 965,655 acre-feet capacity (100 % of operational capacity)

El Niño/La Niña

As of January 11, 2018, the National Oceanic and Atmospheric Administration (NOAA) predicts an 85%-95% chance of La Niña conditions through Northern Hemisphere winter, with a transition to ENSO-neutral expected during the spring.

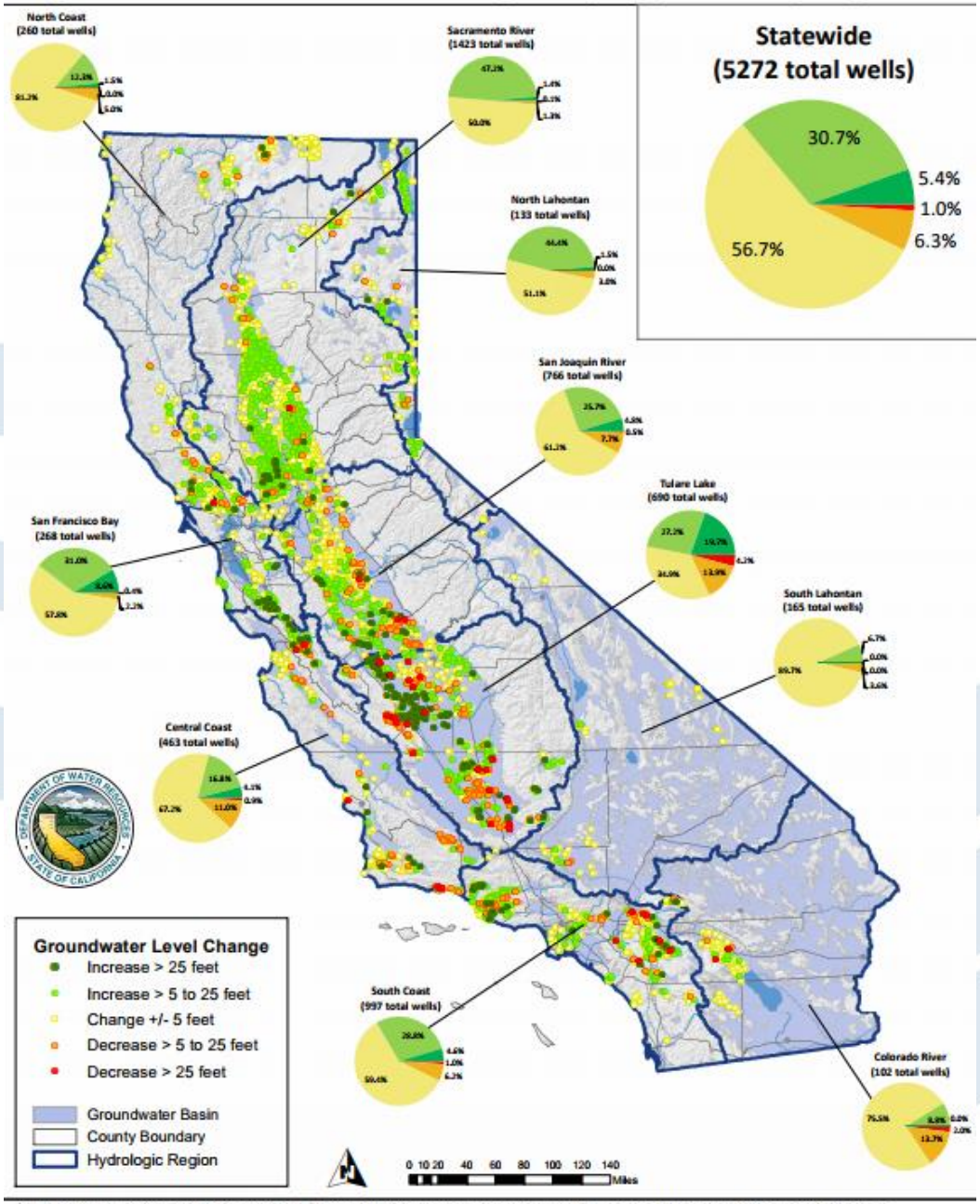

A
33
40
EC
40
33
33
40
B
B
EC
EC
40
50
50
40
33
A
A
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID FMA 2018
MADE 18 JAN 2018
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW
33% 40% 50% 60% 70% 80% 90% 100%
Probability of Below
33% 40% 50% 60% 70% 80% 90% 100%
Probability of Near-Normal
33% 40% 50% 60% 70% 80% 90% 100%
Probability of Above


A
40
33
EC
B
A
EC
33
EC
A
EC
33
40
50
B
50
40
33
40
B
THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID FMA 2018
MADE 18 JAN 2018
EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW
33% 40% 50% 60% 70% 80% 90% 100%
Probability of Below
33% 40% 50% 60% 70% 80% 90% 100%
Probability of Near-Normal
33% 40% 50% 60% 70% 80% 90% 100%
Probability of Above

Groundwater

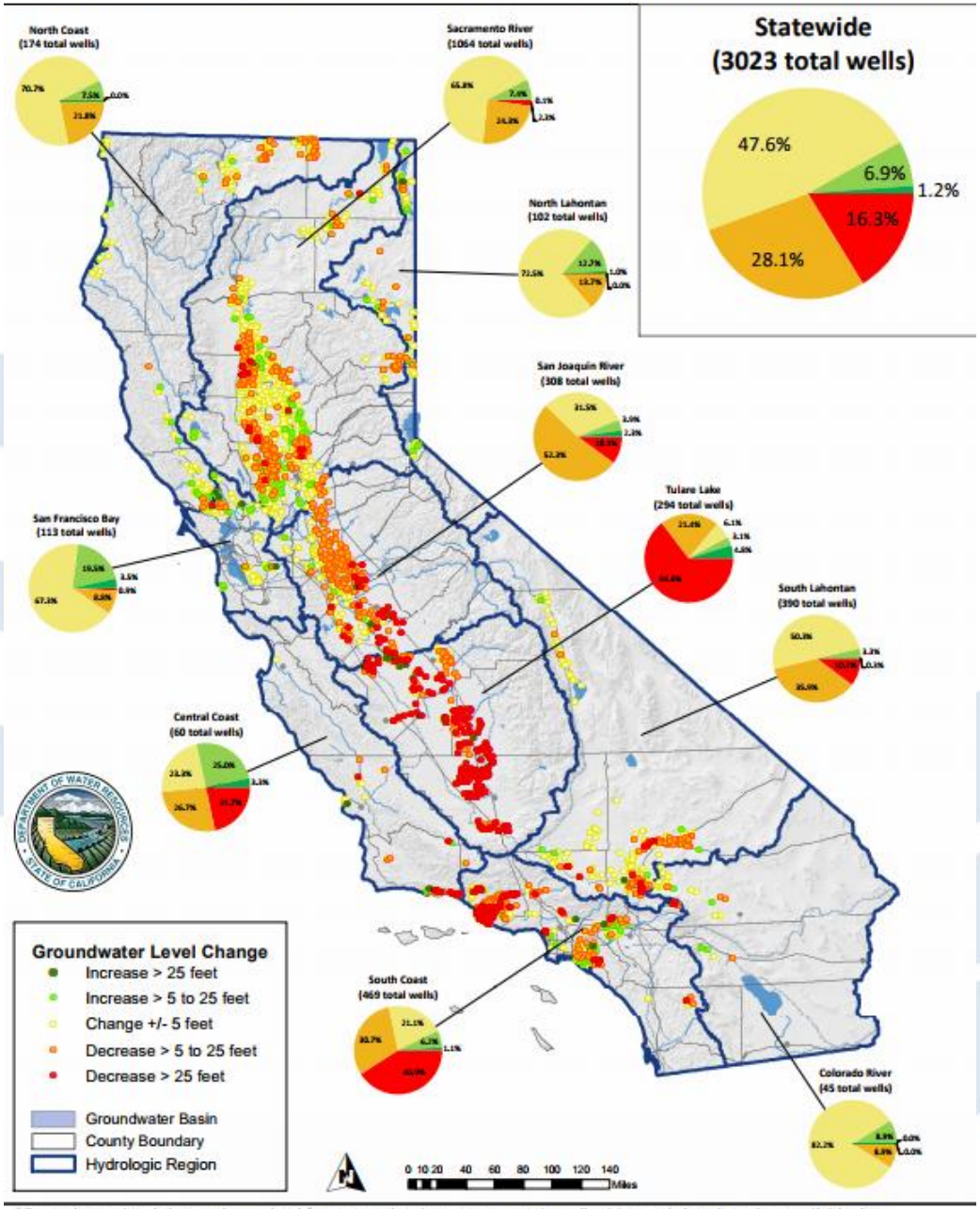
- DWR has updated groundwater data with information from Spring 2017

Figure 3. Groundwater Level Change* - Spring 2016 to Spring 2017



*Groundwater level change determined from water level measurements in wells. Map and chart based on available data from the DWR Water Data Library as of 07/11/2017. Document Name: PIEMAP_S1716_DROUGHT_25ft
Updated: 8/15/2017. Data subject to change without notice.

Figure 4. Groundwater Level Change* - Spring 2011 to Spring 2017



*Groundwater level change determined from water level measurements in wells. Map and chart based on available data from the DWR Water Data Library as of 07/11/2017. Document Name: PIEMAP_S1711_DROUGHT_25ft
Updated: 9/28/2017. Data subject to change without notice.